we retrospectively evaluated 272 (169 M, 103 F) consecutive children that between June 1985 and January 2001 underwent BMT at the "G. Gaslini" Institute. Subjects with solid tumor were excluded. Their median age at transplant was 8 years (range 2 mos. - I 9 yr.), and the source of stem cells was autologous (A), related donor (RD)., and unrelated donor (UD) in 87, 115 and 70 subjects, respectively. 166 children received total body irradiation (TBI) as part of the conditioning regimen; 63 received Busulfan while 43 were treated with other drugs; finally, 54 children received cranial prophylactic irradiation (CPI) (1800 cGy) during front line treatment before BMT.

A total of 41 SNE were observed in 37 children (18 M, 19 F); their median age at BMT was 10 years (range 2 - 16 yr.). Neurological symptoms occurred after a median time of 92 days (range 5 – 3203) The source of HSCT was UD-BM, RD-BM, and A-BM in 19, 16, and 2 cases respectively.). Ten of them received CPI before BMT. Neurological symptoms were: seizures (n=20), changes of mental status and coma (n=12), motor or sensitive defects (n=6), progressive loss of cognitive functions (n=3), clonus and myoclonus (n=2) and visual impairment (n=1). Causes of neurological symptoms were attributed to CSA toxicity (CSA-t) in 21 pt. (77%), to irradiation or chemotherapy injury (IC-i) in 7 (2.6%), to CNS infections (CNS-I) in 7 (2.6%), to CNS hemorrhages in 3 pt. (1.1%) and to immunomediated pathogenesis in the remaining 3 (1.1%). CSA-t occurred in 21 out of 185 patients receiving immunosuppressive therapy. Onset of symptoms was after a median of 96 days (range 20 - 370 days) after BMT. When CSA was discontinued, a complete resolution of SNE was observed in all cases. The 7 IC-i occurred between 1 month and 7 years after BMT. Mental deterioration and /or coma were observed in 5, clonus and dysarthria in one and visual impairment in another. CNS-I were observed in 7 pt. and were mostly of viral origin (2 cases of EBV, and 1 of CMV, HHV6 and adenovirus, respectively), whereas the 2 remaining cases had neurotoxoplasmosis and aspergillosis. The 3 CNS hemorrhages occurred 30, 50 and 250 days from BMT, respectively. Finally the 3 immunomedia-ted SNE were due to a demyelinating leucoencephalopathy in the context of ex-tensive chronic GvHD in 2 cases; and to a Guillain-Barré syndrome in the remainning one.

Preliminary analysis shows that type of BMT ($p<0.01$) and TBI ($p<0.05$) are risk factors for SNE; gender, age at BMT, and CPI were not associated with an increased risk of SNE. Risk factors for the 5 different types of SNE will be presented and discussed.

2.
LATE ONSET IDIOPATHIC THROMBOCYTOPENIC PURPURA CORRELATES WITH RAPID B CELL RECOVERY IN CHILDREN AFTER ALLOGENEIC TRANSPLANTS FROM ALTERNATIVE DONORS. SINGLE CENTRE EXPERIENCE

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Late onset steroid-resistant idiopathic thrombocytopenic purpura (ITP) after allogeneic transplant remains rare yet important clinical problem. Two cases of ITP late post transplant are reported and discussed.

Patient UPN 176. 16-year old girl with MDS-RA underwent allogeneic PBSCT from male matched unrelated donor in August 2000. She was conditioned with Bu 16mg/kg, Cy 200 mg/kg and ATG 20 mg/kg. GvHD prophylaxis consisted of CsA, MTX and methylprednisolone (MP). Hematological recovery was adequate: ANC > 0.5 G/l on day +16, platelets > 50 G/l on day +33. Mild aGvHD I° resolved quickly. No complications were observed until January 2001 (147 days after transplantation), when she developed ITP with a platelet count of 7 G/l and numerous petechiae. BM biopsy confirmed trilineage engratfment with almost 100%

donor chimaerism. Megakaryocytes were abundant and appeared normal. Analysis of lymphocyte subsets revealed rapid recovery of CD19+ B cells (131/µl, incl. CD5+CD19+ cells) in comparison with the previous examination a month ago (9/µl) and substantial number of CD3+CD4+ Th cells (> 100/µl). Steroid-treatment was ineffective and she received high-dose (HD) IVIG (2g/kg over 4 days) with sustained curative effect. She remains now in CR of both MDS and ITP with 100% donor chimaerism (XY-FISH).

Patient UPN 142. 10-month-old boy with Omenn Syndrome underwent allogeneic haploidentical T-cell depleted (TCD) PBSCT from HLA-mismatched mother in October 1999. He was conditioned with Bu 20mg/kg, TT 10mg/kg, Flu 200mg/m^2 and OKT-3. GvHD prophylaxis consisted of TCD (CliniMACS®), CsA, MP and MMF. Hematological recovery was prompt: ANC > 0.5 G/l on day +9, platelets > 50 G/l on day +30. Neither GvHD nor other serious complications were observed until May 2000 (217 days after transplantation), when he developed ITP. with a platelet count of 31 G/l. Chimaerism analysis confirmed 100% donor engraftment. Immune studies revealed rapid recovery of CD19+ B cells (324/µl, incl. CD5+CD19+ cells) in comparison with the previous examination two months ago (57/µl) and peripheral expansion of CD3+CD4+ cells (> 400/µl) incl. CD4+CD69+ cells. Different modalities for treatment of ITP were tried with transient success. Prednisone (4mg/kg) together with IVIG (0.4g/kg) resulted in ITP resolution lasting 2 months. Platelet count dropped again to 51 G/l in August 2000 and HD IVIG (2g/kg) was administered with good yet transient effect. Four more HD IVIG courses every month were required to attain final ITP resolution in January 2001 – 14 months post transplant. The child remains now alive and well with platelet count above 200 G/l.

Conclusions. Rapid B cell recovery correlates with the occurrence of late onset steroid-resistant ITP in recipients of alternative transplants. Th (CD3+CD4+) cell recovery might also trigger autoimmunity by IL-2 mediated non-specific immune activation. The treatment of choice remains HD IVIG. Anti-D immunoglobulin might be used in Rh-positive patients. A novel highly effective option might be therapy with chimeric monoclonal anti-CD 20 antibody (rituximab – Mabthera®).

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3.
PAROTID CARCINOMA AFTER AUTOLOGOUS BONE MARROW TRANSPLANTATION FOR RELAPSED NEPHROBLASTOMA

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Wilms' tumour (WT) is the most common primary genitourinary tumour of childhood with the annual incidence of approximately 8 per million children younger than 15 years of age. Genetic plays an important role in this cancer. WT1 located on chromosome 11p13, WT2 on 11p15, loci at 1p, 7p, 16q, 17p (the p53 tumor suppressor gene), and 19q (the putative familial WT gene FWT2) are believed to harbor genes involved in the biology of WT. The majority of these children are surviving into adult life and due to the combination of genetic susceptibility, irradiation and antineoplastic treatment, are at increased risk for second malignant neoplasms (SMNs). We report the case of a young man with a parotid carcinoma occurring thirteen years after diagnosis of WT. The patient was initially treated according to the SIOP 6 Nephroblastoma protocol, comprising a 4-week two-drug (Actinomycin D, Vincristine) presurgical treatment, nephrectomy and 22-week treatment with biweekly Actinomycin D and Vincristine. No radiation therapy was given. Nine months after the end of therapy he experienced an isolated hepatic relapse, treated with Peptichemio (450 mg/m2), two courses of Cisplatin (40 mg/m2/day for 5 days) and Etoposide